Guilford County Extension Community Garden Outreach, News, and Information

GardenWise

February 2018

Welcome to Gardening 2018!

Well, we've almost made it through another winter, and aside from one brutally cold spell, it really wasn't too bad. Of course, March in Guilford County can bring its share of weather surprises (yes, I'm talking about the year — 1960, if memory serves — when we had substantial snow on three successive Wednesdays), so my single piece of advice this year is simple: Don't plant your tomatoes until May! I wish all of you a fabulously successful gardening season in 2018.

Linda Brandon, EMGV

Vegetable Garden Best Management Practices

Hanna Smith, Horticulture Extension Agent

Once spring rolls around and the threat of cold weather has passed, gardening goes into high gear, and oh what fun it is! While site and plant selection is important, there are other aspects of vegetable gardening that are also just as critical. One of these areas is **soil preparation**. Whether it's a brand new garden or an existing one, an application of compost or decomposed leaves can do wonders to help break up clay soils. A 2-inch to 3-inch layer incorporated in should be enough to get you through the season. Also, when talking about soil preparation, fertilization is a large component of that. **Soil testing is the only real way of know exactly how much fertilizer should be applied to a specific area, and any N.C. Cooperative Extension Office has the free kits available.** Manure can be a valuable addition to soils, but precautions should be taken before adding it to a vegetable garden. First, you want to make sure that you get it from a reputable source, because there can be some herbicide carryover that doesn't get composted out, which can in turn affect your vegetables just like they would any broadleaf weed. Also, you only want to use decomposed manure. It should be aged at least 6 months in an open pile or after it's composted. Most manures purchased from garden centers have been kiln dried so all the pathogens have already been removed.

For watering and weed management, the general rule of thumb is 1 inch of water per week including rain, so a rain gauge is important to keep track of precipitation. Make sure that when supplemental water is used that it is only applied to the ground around the plant and not on the leaves. The longer the leaves are wet the higher the chances of disease problems. Weeds will compete with plants for that water, so it's critical that they are controlled. A steel hoe is a vegetable gardener's best friend unless the weeds are directly around the base of the vegetable which you would then pull by hand. The best way to control weeds is to get them from the start by using mulch. Apply organic mulches 2 to 4 inches deep around plants, and this will also helps conserve soil moisture and reduce the amount of watering required.

When working in the garden, personal hygiene should take precedence. **Make sure to wear gloves and wash your hands well after working in the garden.** When harvesting vegetables you can remove the outer leaves of leafy crops, and for all vegetables make sure to wash with a mild detergent to remove dirt and dust.

Always make sure to monitor for insects and diseases. A simple walk-through every few days should be enough to catch something before it becomes a major problem. While there are many insects and diseases that plague vegetable gardens in the Piedmont, if they are discovered early enough steps can be taken to overcome them without a huge hit to production.

Garden Reports

All Saints Episcopal Church Garden of Eatin'
Our community donation garden has a partnership with the food pantry at nearby Celia Phelps United Methodist Church. All Saints, with four raised beds (4'x20') received a Green Grant award from Episcopal Diocese of NC for installation of a water line to service garden. We are entering the third growing season in 2018. (Stephen McCollum)

Cedar Street Community Garden, High Point
Being a part of something as wonderful as a community garden brings forth a sense of joy and peace among all those involved. It has brought neighbors together and formed friendships. It has shown how much good can come out of something when we all work together. Not only have we planted seeds of fruits and vegetables, but we have also planted friendship and love. (Sarah Sanders)

From the **Peace Community Garden,** some interesting ideas: **Vision:** To eradicate food insecurity in communities significantly impacted by limited geographic or economic access to healthy food.
Mission: To develop a sustainable sub/urban farm that grows, distributes and makes low cost, high quality food accessible to individuals, families, and businesses in the Triad Community.
Values:

- **Share** the wealth of the land with others.
- **Educate** families on healthy eating & self- sustainability.
- **Advocate** against issues that create/sustain food insecurity.
- **Collaborate** with others who share our interests in eradicating food insecurity.
- **Steward** our resources with integrity, excellence, & respect for others.

New Jerusalem's Gadis Garden: We're expanding this season! In 2016, we started with 2 garden beds. This year, we will have at least 6 beds for vegetables, herbs, and fruits for the community. Here are some photos to show our progress. (Malia Walker)

The Plant Sale Is Coming!

The Plant Sale Is Coming!

The 16th Annual Extension Master Gardener Passalong Plant Sale is not to be missed! May 11 - 12, 2018, at the N.C. Cooperative Extension, Guilford County Center, 3309 Burlington Road. We have plants in every category - Sun Perennials, Shade Lovers, Natives, Pollinators, Succulents, Trees, Shrubs, Veggies, Herbs, Annuals, Houseplants and more. Master Gardener volunteers will be on hand to answer your gardening questions and advise you on the right plants for *your* garden. Come early for the best selection! For more information, contact the Guilford County Cooperative Extension office at 336-641-2400. **See you there!**

The Master Gardener volunteers are also offering **pre-ordered Ferns & Hostas**. We have a great selection of six gorgeous ferns and five fabulous hostas. Plants are in quart sizes and are $6 each. This pre-sale ends March 14. Pickup will be on Thursday, May 10, from noon - 5:30 pm. Contact any Master Gardener for more information, or call the office at the number above.

Sharing Your Excess in Guilford County

(Editor's Note: Sharing really IS caring . . . . . .and gardeners are some of the most generous people in the world.)

We have had interest from groups that want to start community gardens, but have limited funds to get things going. Does your garden have an excess of materials, tools or supplies that your gardeners no longer need and you would be willing to donate? Items that are useful: lumber for raised beds; regular or soaker hoses; tools such as rakes, trowels, shovels; seeds that you are not going to be using this season, etc. Let us know the item/s and your contact information and we will publicize them in our April newsletter.

Linda Anderson anderson7510@gmail.com

SHARE THE HARVEST

As you are planning what you will be growing this year in your community garden, please consider planting an extra row that you can donate to Share the Harvest, the non-profit started by Guilford County community gardeners to help feed the hungry. We collect produce at our collection sites throughout the county during the growing season, from the beginning of June through the end of October, and then distribute it from the Interactive Resource Center in downtown Greensboro to agencies that either have a food pantry or prepare a meal for the hungry. In 2017 9,392 pounds of fresh produce were donated. Thanks! An updated list of collection sites will be in the April newsletter.

Growing the Green Way Class Series SPRING 2018

Class Locations :

- Cooperative Extension Office, 3309 Burlington Road, G'boro, NC 27405
- Glenn McNairy Branch Library, 4860 Lake Jeanette Road, G'boro 27455
- Greensboro Arboretum (Ed Center), 401 Ashland Drive, G'boro 27403
- Kathleen Clay Edwards Library, 1420 Price Park Road, G'boro, NC 27410

** Programs are designed to be approximately one hour long, but may run slightly over depending on questions and discussion - which are encouraged!*

CLASSES ARE FREE

Pre-Registration Is Requested

To register for your choice of session and location:
http://go.ncsu.edu/growing_green_way
Call 336-641-2400
Or Email Lauren Taubert at:
lauren_taubert@ncsu.edu

PLANNING THE 3-SEASON VEGETABLE GARDEN

Vegetable gardening is especially productive in the Piedmont because we can grow food at least 10 months of the year! The key is good planning and succession planting. January is the perfect time to start getting ready; let's talk about the many ways to get the most out of your personal planting space.

Monday, Jan. 8th	6:30 pm	Kathleen Clay Edwards Library
Thursday Jan. 11th	6:30 pm	Glenn McNairy Branch Library
Sunday, Jan. 14th	4:00 pm	Greensboro Arboretum
Tuesday, Jan 16th	6:30 pm	Cooperative Extension

PROPER PRUNING PREVENTS POOR PLANT PERFORMANCE

The art of pruning does not mean shearing shrubs into green meatballs (yikes!). We'll talk about the tools, techniques, and especially the timing for pruning small ornamental trees and shrubs. Doing it right is the easy way to have healthier, prettier, and longer-lived plants. Note: this program does not cover the specific pruning needs of fruit trees.

Wednesday, Jan. 24th	6:30 pm	Kathleen Clay Edwards Library
Thursday, Jan. 25th	6:30 pm	Glenn McNairy Branch Library
Sunday, Jan. 28th	4:00 pm	Greensboro Arboretum
Tuesday, Jan. 30th	6:30 pm	Cooperative Extension

TOTALLY TOMATOES—ALL ABOUT OUR FAVORITE FRUIT

It's time to start planning, that's the key to enjoying the taste of your own home-grown tomatoes. That's all we'll be talking about in this session – proven tips and techniques for successfully growing America's most popular garden vegetable (or is it a fruit?). Get ready for tomato sandwiches all summer long!

Monday, Feb. 5th	6:30 pm	Kathleen Clay Edwards Library
Thursday, Feb. 8th	6:30 pm	Glenn McNairy Branch Library
Sunday, Feb. 11th	4:00 pm	Greensboro Arboretum
Tuesday, Feb. 13th	6:30 pm	Cooperative Extension

BEAUTIFUL AND SUSTAINABLE LAWNS—A GREENER YARD

Have a sustainable lawn by knowing and using good growing practices all year, to save you time and money as well as reducing environmental impact. Establishing a healthy stand of grass with good planning and sensible management means you'll have a beautiful lawn and minimize issues with weeds and diseases.

Monday, Feb. 19th	6:30 pm	Kathleen Clay Edwards Library
Thursday, Feb. 22nd	6:30 pm	Glenn McNairy Branch Library
Sunday, Feb. 25th	4:00 pm	Greensboro Arboretum
Tuesday, Feb. 27th	6:30 pm	Cooperative Extension





See back page for more class listings

GROW YOUR BEST VEGETABLE GARDEN

Learning and following best practices leads to best results in your vegetable garden. Topics will include how to prepare soil, the selection and timing of vegetable varieties, good upkeep, and using integrated pest management techniques to control insects and diseases organically. Growing your own food can be economical, educational, and fun.

Thursday, March 1st	6:30 pm	Glenn McNairy Branch Library
Sunday, March 4th	4:00 pm	Greensboro Arboretum
Monday, March 5th	6:30 pm	Kathleen Clay Edwards Library
Tuesday, March 13th	6:30 pm	Cooperative Extension

PLANNING AND PLANTING FOR POLLINATORS

Gardeners need pollinators, and pollinators need gardeners too. Even small home gardens can provide important habitat for them, especially in urban and suburban neighborhoods: year-round food sources, and places for the next generation to reach maturity. Let's talk about creating a pollinator garden that is also a beautiful and fascinating setting for the gardener to enjoy.

Thursday, March 15th	6:30 pm	Glenn McNairy Branch Library
Sunday, March 18th	4:00 pm	Greensboro Arboretum
Wednesday, March 21st	6:30 pm	Kathleen Clay Edwards Library
Tuesday, March 27th	6:30 pm	Cooperative Extension

CONTAINERS FOR CURB APPEAL

Creative containers are great for a display of pansies, petunias or other colorful annuals - and so much more! They're also perfect for interesting combinations and unusual plantings that provide curb appeal for your home. We'll discuss how container-hardy perennials, shrubs, and even small trees can be used to add year-round visual focus and create a garden in any location.

Sunday, March 25th	4:00 pm	Greensboro Arboretum
Thursday, March 29th	6:30 pm	Glenn McNairy Branch Library
Monday, April 2nd	6:30 pm	Kathleen Clay Edwards Library
Tuesday, April 3rd	6:30 pm	Cooperative Extension

INCLUDE NATIVE PLANTS - BEAUTIFUL AND BENEFICIAL

With a little information and good selection, anyone can include native plants for a garden that is attractive in even the most urban of settings. Including natives can be done without replanting your whole yard - even small changes help offset habitat loss. We can all enjoy healthier and more resilient landscapes by increasing plant diversity (and beauty!) in our own backyards.

Sunday, April 8th	4:00 pm	Greensboro Arboretum
Tuesday, April 10th	6:30 pm	Cooperative Extension
Thursday, April 12th	6:30 pm	Glenn McNairy Branch Library
Monday, April 16th	6:30 pm	Kathleen Clay Edwards Library

FLOWERPOT FOOD: GROW HERBS AND VEGETABLES IN CONTIANERS

If you have limited space, sun, or time - a set of containers can be a wonderfully productive garden space. Grow some of your own vegetables and herbs to eat better and also save on your food budget! We'll cover all the basics of the best ways to do it: with the right location, good timing, an easy plan, and a little tending.

Friday, April 20th	12:00 pm	Kathleen Clay Edwards Library
Sunday, April 22nd	4:00 pm	Greensboro Arboretum
Tuesday, April 24th	6:30 pm	Cooperative Extension
Thursday, April 26th	6:30 pm	Glenn McNairy Branch Library

PRESENTED BY:

NC COOPERATIVE EXTENSION SERVICE IN GUILFORD COUNTY and EXTENSION MASTER GARDENER℠ VOLUNTEERS

ALSO SPONSORED BY:

GREENSBORO PARKS & RECREATION DEPARTMENT and GREENSBORO BEAUTIFUL, INC.

NC COOPERATIVE EXTENSION

GREENSBORO Beautiful

NC STATE EXTENSION

Master Gardener | Guilford County

LUNCH AND LEARN AT THE LIBRARY

SPRING GARDENING SERIES 2018

Join Guilford County's Extension Master Gardener℠ volunteers for a lively and informative gardening presentation each month through the spring season. These "Lunch and Learn" sessions are all scheduled from 12:00 noon until 1:00 pm: no refreshments are provided, but participants are welcome to bring and eat lunch during the program. Take a mid-day break from your schedule and talk gardening with friends!

JANUARY— Success with Houseplants: Growing the Indoor Garden

Thursday, January 11th	Hemphill Branch
Tuesday, January 16th	McNairy Branch
Monday, January 22nd	Glenwood Branch
Friday, January 26th	Benjamin Branch

Does your indoor foliage collection look like an episode of "Desperate Houseplants"? Meeting their needs is not luck, or something you're born with – just a little bit of information makes it easy and fun. The key is making the right selections, and learning a few simple steps to keep them thriving.

FEBRUARY— Flowerpot Food: Growing Vegetables and Herbs in Containers

If you have limited space, sun, or time - a set of containers can be a wonderfully productive garden space. Grow some of your own food plants to eat better and save on your food budget! We'll cover all the basics of the best ways to do it: with the right location, good timing, a good plan, and a little tending.

Monday, February 12th	Glenwood Branch
Thursday, February 15th	Hemphill Branch
Tuesday, February 20th	McNairy Branch
Friday, February 23rd	Benjamin Branch

MARCH— Easy to Grow Culinary Herbs

Tuesday, March 6th	McNairy Branch
Thursday, March 8th	Hemphill Branch
Monday, March 12th	Glenwood Branch
Friday, March 23rd	Benjamin Branch

Home grown culinary herbs in your garden are beautiful and tasty too. We can grow parsley, sage, rosemary and thyme – and the pizza herbs like basil and oregano – and many more. Come join us to talk about being successful at growing the herbs you want to use in your kitchen.

APRIL— Containers for Curb Appeal

Monday, April 9th	Glenwood Branch
Thursday, April 12th	Hemphill Branch
Tuesday, April 17th	McNairy Branch
Friday, April 27th	Benjamin Branch

Creative containers are great for a display of pansies, petunias or other colorful annuals - and so much more! They're also perfect for interesting combinations and unusual plantings that provide curb appeal for your home. We'll discuss how container-hardy perennials, shrubs, and even small trees can be used to add year-round visual focus and create a garden in any location.

Library Locations :

- McNairy Branch, 4860 Lake Jeanette Road, Greensboro, NC 27455
- Glenwood Branch, 1901 West Florida Street, Greensboro, NC 27403
- Hemphill Branch, 2301 West Vandalia Road, Greensboro, NC 27407
- Benjamin Branch, 1530 Benjamin Parkway, Greensboro, NC 27408

** Programs are designed to be approximately one hour long, but may run slightly over depending on questions and discussion - which are encouraged!*

CLASSES ARE FREE

Pre-Registration Is Requested

To register, visit:

http://go.ncsu.edu/gcces_lunch_and_learn

Or call 336-641-2400

Registrations can also be emailed to Lauren Taubert at: lauren_taubert@ncsu.edu

INTERESTED IN MORE GARDENING PROGRAMS?

Visit Extension's website (www.guilfordextension.com) for the schedules of our gardening programs and public events around Guilford County.

NC COOPERATIVE EXTENSION

Greensboro Public Library

NC STATE EXTENSION
Master Gardener | Guilford County

2018 Spring Gardening Classes

High Point Public Library

Presented by Extension Master Gardener℠ Volunteers

All sessions are on Wednesday nights in the Morgan Room From 6:00—7:30 pm.

Location

High Point Public Library

901 North Main Street
High Point, NC
(336) 883-3660

Classes are free!

No pre-registration required.

QUESTIONS?

Call Lauren Taubert at 336-641-2400 or by email at Lauren_taubert@ncsu.edu

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www.guilfordextension.com

JANUARY 17TH

PLANNING THE 3-SEASON VEGETABLE GARDEN

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FEBRUARY 21ST

TOTALLY TOMATOES - ALL ABOUT OUR FAVORITE FRUIT

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MARCH 21ST

CONTAINER EDIBLES - GROWING VEGETABLES AND HERBS IN SMALL SPACES

If you have limited space, sun, or time - a set of containers can be a wonderfully productive garden space. Grow some of your own vegetables and herbs to eat better and also save on your food budget! We'll cover all the basics of the best ways to do it: with the right location, good timing, a good plan, and a little tending.

APRIL 18TH

GROW YOUR BEST VEGETABLE GARDEN

Learning and following best practices will lead to best results in your vegetable garden. Topics will include how to prepare soil, the selection and timing of vegetable varieties, good upkeep, and using integrated pest management techniques to control insects and diseases organically. Growing your own food can be economical, educational, and fun.

NC COOPERATIVE EXTENSION

NC STATE EXTENSION

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Home Vegetable Gardening

Variety Selection Quick Reference Guide for Guilford County

NC Cooperative Extension
Guilford County Center

3309 Burlington Road
Greensboro, NC 27405

Phone: 336-375-5876
Website: guilford.ces.ncsu.edu/

Prepared by
Larry Bass, Extension Horticulture Specialist

Localized by
Karen Neill, Extension Horticulture Agent

Seed or Plants	Amount Per Person Per Year	Suggested Varieties (Italics are Favorites of Guilford Extension Staff)
Asparagus (crowns)	10	*Jersey Giant, Jersey Knight*
Beans, snap	1/4 pound	Roma (flat), Tenderette, *Blue Lake, Provider, Contender*
Beans, pole	1/4 pound	Kentucky Wonder 191, Blue Lake Stringless, Romano (flat), *Half Runne*
Beans, bush lima	1/2 pound	Fordhook 242
Beans, pole lima	1/2 pound	King of the Garden
Beets	1/4 packet	Ruby Queen, Early Wonder, *Red Ace*
Broccoli	15 plants	DeCicco, Premium Crop, *Pokman*
Brussel sprouts	25 plants	Long Island Improved, Jade Cross Hybrid, *Oliver, Masterline*
Cabbage (plants)	25 plants	Round Dutch, Early Jersey Wakefield, Red Acre, *Golden Acre*
Cantaloupe	12 plants	Burpee Hybrid, Ambrosia
Carrots	1/4 packet	Danvers Half Long, *Mokum*
Cauliflower	25 plants	*Snowcrown*
Collards	25 plants	Vates, Morris' Improved Heading, Carolina
Corn, sweet	1 packet	Silver Queen, Senneca Chief, Honey 'n Pearl, How Sweet It Is, Bodaciou
Chinese cabbage	1/4 packet	Michihli, Hybrid G, Chieftain Savoy
Cucumbers, pickling	1/4 packet	Carolina, Calypso, Liberty, County Fair '83
Cucumbers, slicing	1/4 packet	Poinsett, Sweet Slice, Marketmore, County Fair '83, Salad Bush, Fanfar
Eggplant (plants)	2 plants	Florida Highbush, *Parks Whopper, Casper*
Kale	1/4 ounce	Green Curled Scotch, Early Siberian, Vates, Dwarf Blue Curled Scotch
Kohlrabi	1/4 ounce	White Vienna, Grand Duke Hybrid, *Kolibri*
Lettuce (leaf)	1/4 packet	Grand Rapids, Salad Bowl, Buttercrunch, *Green Ice*
Lettuce (head)	15 plants	*Summertime*
Mustard	1/4 ounce	Southern Giant Curled, Tendergreen
Onions (seed)	1/4 ounce	*Granex, Candy, Superstar*
Onions (sets or plants)	50	Ebenezer, Early Grano
Okra	1/4 packet	Clemson Spineless, Lee, Annie Oakley, Burgundy
Peas (edible-podded)	1/2 pound	Sugar Snap, Mammoth Melting Sugar, Snowbird
Peas, garden	1/2 pound	Wando, Green Arrow, *Tall Telephone, Knight*
Peas, southern	1/2 pound	Dixilee, Mississippi Silver, Colossus, Hercules, Mississippi Purple Hull
Peppers, sweet (plants)	4 plants	California Wonder, *Charleston Belle*
Peppers, hot (plants)	2 plants	Red Chili, Cayenne, Hungarian Yellow Wax, *Early Jalapeno*
Potatoes (Irish)	10 pounds	Kennebec, *Yukon Gold*
Pumpkins	1/4 packet	Autumn Gold, Howden's Field, Baby Bear, Connecticut Field
Radishes	1/4 packet	Early Scarlet Globe, Cherry Belle
Rutabagas	1/4 packet	American Purple Top, Laurentian
Spinach	1/4 packet	Dark Green Bloomsdale, *Noble*
Squash, summer	1/4 packet	Seneca Prolific (yellow), Zucchini Elite (green), Sun Drops, Goldbar
Sweet potatoes	75 plants	Porto Rico 138, Jewel, Pope, *Beauregard*
Swiss chard	1/4 packet	Lucullus, *Fordhook Giant*
Tomatoes (plants)	15 plants	Whopper, Mt. Pride, Celebrity, Big Beef, *German Pink*
Turnips	1/4 ounce	Purple Top White Globe, Tokyo Cross Hybrid, White Egg
Watermelons	1/2 ounce	Congo, Sugar Baby (small)

	Suggested Planting Dates	Distance Plants (Inches)	Planting Depth (Inches)	Min. Soil Temp. (oF)	Approx. No. of Seeds Per Ounce	Days to Maturity
	Nov 15 - Mar 15	15	6	-	-	2 years
	Apr 15 - July 15	3	1	60	100	50-55
	Apr 15 - July 1	6	1	50	100	65-70
	May 1 - July 1	6	1.5	65	70	65-80
	May 1 - June 15	6	1.5	65	70	75-95
	Mar 15 - Apr 15; July 15 - Aug 15	2	0.5	50	1,600	55-60
	Mar 15-31; July 15 - Aug 15	18	0.5	45	9,000	70-80
	July 1-15	20	0.5	45	9,000	90-100
	Feb 1 - Apr 1; Aug 1-15	12	0.5	45	9,000	70-80
	Apr 20 - June 1	24	1	70	1,000	85-99
	Feb 15 - Mar 1; July 1-15	2	0.25	45	23,000	85-95
	Mar 15-31; Aug 1-15	18	0.5	45	10,000	55-65
	July 15 - Aug 15	18	0.5	45	8,000	60-100
ndy form	Apr 15 - June 1	12	1.5	50	150	85-90
	Mar 15 - Apr 1; Aug 1-15	12	0.5	50	9,500	75-85
	Apr 20 - May 15; Aug 1-15	10	1	65	1,000	40-50
	Apr 20 - May 15; Aug 1-15	10	1	65	1,000	40-50
	May 1-31	24	0.5	70	6,000	80-85
	Mar 1 - Apr 1; Aug 15 - Sept 1	6	0.5	45	10,000	40-50
	Mar 1 - Apr 15; Aug 1 - Sept 1	4	0.5	55	8,000	50-60
	Mar 1 - Apr 1; Aug 1 - Sept 1	6	0.25	45	25,000	40-50
	Feb 15 - Mar 15; Aug 15-31	10	0.25	45	25,000	70-85
	Mar 1 - Apr 1; Aug 1 - Sept 15	2	0.5	40	15,000	30-40
	Jan 15 - Mar 31; Sept 1-30	4	0.5	50	9,500	130-150
	Feb 1 - Mar 15; Sept 1-15	4	-	-	-	60-80
	May 1-31	12	1	70	500	60-70
	Jan 1 - Mar 1	1	1	40	200	60-70
	Jan 1 - Mar 1	1	1	40	200	65-70
	May 1 - July 1	4	1	70	125	55-65
	May 1-31	18	0.5	65	4,500	75-80
	May 1-31	15	0.5	65	4,500	75-80
	Feb 15 - Apr 1	10	5	40	-	95-120
	Apr 15 - June 15	48	1.5	70	110	115-120
	Feb 1 - Apr 1; Aug 15 - Sept 15	1	0.5	45	2,000	25-30
	Feb 1 - Apr 1; July 1 - Aug 1	4	0.5	60	12,000	70-80
	Feb 15 - Mar 15; Aug 1-15	6	0.5	45	2,800	50-60
	Apr 15 - May 15; Aug 1-15	24	1.5	60	300	50-60
	May 15 - June 15	10	-	70-		95-125
	Mar 15 - May 1	6	0.5	50	1,600	60-70
	Apr 20 - July 15	18	0.5	60	10,000	75-85
	Feb 1 - Apr 15; Aug 1-31	2	0.5	60	13,000	55-60
	Apr 15 - June 1	60	1.5	70	250	90-100

Planning your Garden

- Using the table in this folder. Determine your vegetable needs based on your family preferences. Determine whether they are consistent with your garden space.
- If space is limited, concentrate on vegetables that yield that greatest return for your effort, such as pole beans, tomatoes, cabbage, root crops, and leafy greens.
- Plan for year-round production through successive plantings.
- If practical, run rows east and west.
- Don't plant tall-growing vegetables on the south side of lower-growing ones. Group tall-growing crops together on the north side so they won't shade shorter plants.

Locating the Garden

Locate your garden near a source of water for irrigation and on fertile, well-drained soil. Avoid areas near trees and large shrubs because your garden will need full sunlight.

Soils and Fertilizer

Have your soil analyzed. Guilford County Cooperative Extension can provide a soil test kit. If the soil is crusty and sticky, add compost to improve its tilth.

Broadcast and till in fertilizer or apply it in furrows 3 inches to either side of the row in which your seeds or transplants will be planted. Sidedress with a light application of nitrogen each two to three weeks using 2 cups of sodium nitrate or calcium nitrate per hundred feet of row. To avoid fertilizer injury, keep the sidedressing material 4 to 6 inches from the stems of the plants.

Transplanting and Seeding

Plant seeds two to three times as deep as the greatest diameter of the seed. Cover the seed and firm the soil lightly. Water young transplants with a starter solution made by dissolving 4 level teaspoons of 8-8-8 fertilizer or equivalent in 1 gallon of water.

For plants in peat cups or cubes, be sure to cover the containers well with soil when you transplant them to the garden. Provide temporary shade for tender transplants for two or three days after you set them out.

Mulching

Mulching helps to conserve moisture, reduce weeds, and reduce erosion. Use leaves, old shavings, straw, newspaper, or compost. Organic mulches keep the soil cool. If you use newspaper, be sure to hold it in place with rocks or soil.

Because organic mulches such as sawdust and compost can "tie-up" nitrogen, you may have to sidedress with nitrogen more often and in larger amounts when these materials are used.

Pest Control

Don't panic if you see one or two insects or minor disease symptoms on your plants. If damage is obvious contact Guilford County Cooperative Extension to help identify the pest and recommend control measures. Be sure the insect or disease is properly identified before taking action.

Further Information

If you need more detailed information on home gardening, see North Carolina Cooperative Extension publication Home Vegetable Gardening. Contact Guilford County Cooperative Extension for more help with your vegetable garden.

Below are some locations to purchase seeds from catalogs. We do not recommend one nursery over another. This is not an extensive list, just a starting point. We do however recommend buying local if at all possible.

Baker Creek Heirloom Seeds
417-924-8917
www.rareseeds.com
Supplier of over 1400 heirloom variety of seeds.

Pinetree Garden Seeds
207-926-3400
www.superseeds.com
Supplies vegetable seeds, annual and perennial flower seeds, herb seeds, cover crop seeds, potato tubers, onion sets, strawberries, raspberries, rhubarb and bulbs.

Johnny's Selected Seeds
877 564 6697
www.johnnyseeds.com
Supplies a wide variety of seeds and tools.

Park Seed Co.
800-213-0076
www.parkseed.com
Supplies a wide variety of seeds, annual plants, garden décor, supplies and tools.

Seed Savers Exchange
563-382-5990
www.seedsavers.org
A non-profit member supported organization that saves and shares heirloom seeds.

Southern Exposure Seed Exchange
540-894-9480
www.southernexposure.com
Supplies a wide variety of heirloom seeds.

Sustainable Mountain Agriculture Center
859-986-3204
www.heirlooms.org
Supplies collected family and community heirloom seeds and plants, primarily beans and tomatoes.

We're deliberately repeating this Crop Rotation article from our last issue because the topic is really important, and now's the time to plan WHERE you'll plant this year's crops based on what was planted where last year.

Crop Rotation for the Small Garden

By Carol Hancock, Extension Master Gardener Volunteer

Small backyard vegetable gardens can be susceptible to the same plant diseases and insects that plague bigger farms. The use of chemical controls for these problems might be undesirable or unavailable in the home setting.
The age- old practice of crop rotation is one way to prevent or lessen some of these problems, even in a small garden. Crop rotation means changing the crop each year on the same piece of ground.

Home gardeners tend to plant what they like and find easy to grow. This tendency leads to cultivating the same crops on the same areas of land year after year. Growing vegetables from the same botanical family or vegetables that have the same nutritional requirements in one garden area more often that once every three years may lead to a decline in soil fertility and higher incidence of certain insect pests and disease problems. Soil born disease organisms can remain in the soil for long periods of time and some of these tend to attack vegetables from the same botanic families.

Three Reasons to Rotate Vegetable Crops:

1. Reduction of harmful insects and plant diseases by rotating the location of plants from the same families on a piece of ground.
2. Better plant nutrition by rotating location of plants that make the same nutritional demands on the soil on a piece of ground.
3. Improvement of soil structure by rotating plants that have roots at various depths and that are cultivated with different techniques.

Common Vegetable Families:

Although the parts of vegetables that we eat (roots, leaves, stems, etc.) may be different, botanically the plants may belong to the same family.

Sunflower family	lettuces, sunflowers
Goosefoot family	beets, spinach, chard, quinoa
Mustard family	mustard greens, rutabaga, kale, broccoli, cabbage cauliflower, turnip, radish, watercress
Onion family	garlic, shallots, leeks, onions, chives
Gourd family	melons, squashes, gourds
Pea family	peas, beans, jicama,peanuts
Nightshade family	peppers, tomatoes, eggplant, potato
Carrot family	celery,dill,chervil,fennel,carrot,parsnip,parsley
Grass family	corn

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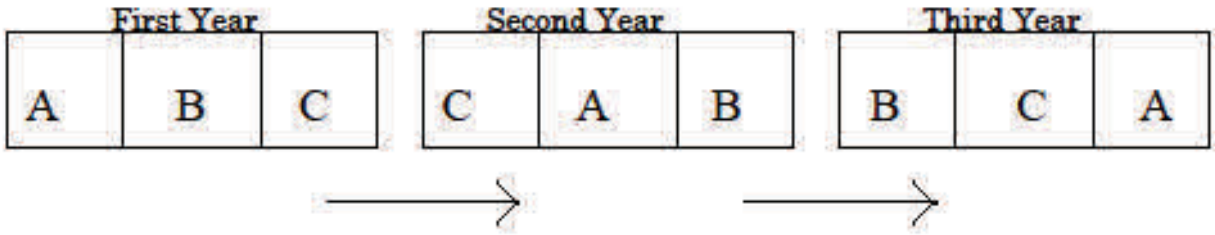
It is ideal to allow three years between the planting of same families in the same garden area. Here is a simple example for a three-year rotation in a small garden. A family likes to plant (A) tomatoes, (B) beans and (C) squash.
The garden is divided up into three parts. The following diagram illustrates the rotation for the recommended three-year rotation. Year four would return to the first year plan.



The above example of crop rotation is a very simple one. Many home gardeners with limited space like to grow more than three crops. The arrangement of crops depends on many factors such as size and shape of beds, climate and soil in growing areas and number of crops to be grown. The planning process can seem complicated when juggling numerous plants in a limited space. A hand drawn diagram of the garden spaces available and vegetable named index cards to be laid in the appropriate spaces to be planted can be useful. A written record of each year's rotation is essential to keeping track of the plan.

In small home gardens, other crop rotation options may be considered. If space is very limited the gardener may choose to grow only beans and their family members in year one, only tomatoes and their family members in year two and only squash family members in year three. Another option, if space allowed, would be to move the entire garden plot to another garden area each year. The plot that is now vacant would benefit from a planting of some soil amending cover crop (green manure) such as annual rye, crimson clover or buckwheat. This is a great way to improve the soil prior to the return to vegetable cultivation.

Experimenting with crop rotation in the small garden may lead to healthier and more productive vegetable crops. Such a practice that contributes to reliability and sustainability can become a valuable part of gardening technique.

Resources

Coleman, Eliot. The New Organic Grower. Chelsea Green, Chelsea, Vermont. 1989.

Ashworth, Suzanne. Seed to Seed. Seed Saver Publications. Decorah, Iowa. 1991.

Rodale's All-New Encyclopedia of Organic Gardening. Edited by Marshall Bradey and Barbara W. Ellis. Rodale Press. 1997.

University of Illinois Cooperative Extension website. http://urbanext.ilinois.edu/gardenerscorner/issue_04/04_winter_05.html

Bern, Karen M.. Penn State Master Gardeners: The Vegetable Garden-Crop Rotation. http://blogs.mcall.com/master_gardeners/2009/01/the-vegetable-garden-crop-rotation.html.

Why are we making such a big deal out of crop rotation? Because it's one of the most important, and most often overlooked, ways to keep your garden healthy and productive! Before this summer gardening season ends and you plant your fall crops, take a moment to either *photograph* your current garden or make *detailed notes* of where each type of plant is located.

Next spring, before you put the first plant in the ground, refer to the handy illustration on the previous pages to be certain you don't plant the same type of crop in the same location once again. Yes, it's challenging to rotate crops in a small raised bed. One approach, if you're friendly with your gardening neighbors, is to do a joint crop rotation. Three of you can agree to devote three entire raised beds to one kind of crop per bed instead of planting multiple veggie types in each of the beds. This spring, Joe can grow tomatoes, Mike can grow squash and cukes, and Millie can grow, say, beans. That will eliminate trying to manage three different plant types in a 4'x 8' bed, which admittedly becomes challenging.

Keep YOUR garden soil healthy and happy: Rotate those crops!

Kids' Corner

Root View Box

Some of the plants we eat grow below the ground. A "Root View Garden" allows you to actually view these plants as they grow.

What you need:

- Half-gallon milk carton (a coated cardboard box, not a plastic jug)
- Clear plastic wrap
- Strong tape, like packing tape or duct tape
- Scissors
- Potting Soil
- Carrot Seeds
- Radish Seeds

What to do:

1. Using your scissors cut off the top of the milk carton
2. Poke a hole in the side of the milk carton and cut out a square, about 4 inches wide and 4 inches high or slightly higher.
3. Cut a piece of plastic wrap to fit over the window. Tape it tightly on all sides.
4. Fill the carton with soil and plant a few of the carrot and radish seeds.

Water the soil and put the carton in a sunny place.

1. Since the roots tend to grow straight down, put something under one end of the carton to slightly tip it to keep the growing roots visible.

Over the next few weeks, enjoy watching your roots grow!

NC STATE UNIVERSITY

College of Agriculture & Life Sciences
Department of Horticultural Science

Horticulture Information Leaflet 8207
11/02

GROWING BLUEBERRIES IN THE HOME GARDEN

Charles M. Mainland and William O. Cline
Extension Horticultural Specialists

Blueberries can be grown in home gardens anywhere in North Carolina if the right species and proper soil modifications are used. Blueberries are typically used in the landscape as hedges for screening purposes, but they can also be used in cluster plantings, or as single specimen plants. Blueberries are an ideal year round addition to the landscape. They have delicate white or pink flowers in the spring, the summer fruit has an attractive sky blue color, and the fall foliage adds great red and yellow colors to the landscape. In addition, blueberry plants lend themselves to the 'organic' approach of gardening, since pesticides are rarely needed in home garden plantings.

Soil pH - Blueberries require a lower pH than many other small fruit crops. Before planting, take a soil test. Apply wettable sulfur (90% S) if pH is above 5.3 for rabbiteye blueberries or 5.0 for highbush blueberries. Use 1.0 pound (2.5 cups) per 100 square feet on sandy soils to lower pH by 1 unit (for instance, from 6.0 to 5.0). Apply 2.0 pounds per 100 square feet for the same amount of pH lowering on heavier soils containing silt, clay or more than 2% organic matter. Try to achieve a pH of around 4.8; too much reduction can be detrimental to bush growth. Apply sulfur at least 3-4 months before planting, and take another soil test before planting. If pH is still above the acceptable range, additional sulfur can be applied. If you must plant without an initial soil test, mix 1 cubic foot of peat moss with an equal amount of sand. On a heavy clay soil or a soil that sometimes remains wet, put the peat-sand mixture on the soil surface. If you are certain the soil has good internal drainage, part of the peat-sand mixture can go in a hole or furrow several inches below the soil surface. However, leave enough of the peat-sand mixture to form a mound (single plant) or ridge (row of plants) at least 6 inches above the surrounding soil surface (Figure 1). The mound or ridge will insure against damage from excess water, however, with this planting method, water thoroughly 2 to 3 times per week during dry periods, because the raised peat-sand mix will dry out quickly.

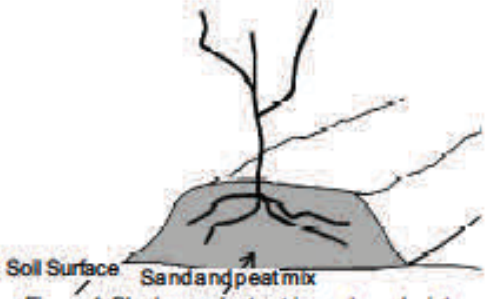


Figure 1. Blueberry plant set in peat sand mixture.

Organic Additions - If the soil contains less than 2% organic matter (OM on soil test report) incorporating peat moss or well-decayed pine sawdust or bark will improve plant survival and growth. Apply 3 to 4 inches of the organic material

over the row in a band 18 to 24 inches wide and incorporate thoroughly using a roto-tiller or spade to a depth of 6 to 8 inches. Preparing the beds in the fall will allow planting earlier in the season (late February to late March depending on the location). If the organic material is incorporated in the fall, any sulfur required to lower the pH can be added at the same time. Avoid opening a furrow, adding the organic material and planting directly in the pure organic material. Water and nutrient management is likely to be difficult in the pure organic material and plants are more likely to become weak and die.

Drainage - Blueberry plants require excellent soil drainage, so provisions for drainage must precede planting. Soil maps or observing the soil profile may be helpful in predicting internal drainage. Alternatively, digging a "dry well" can be a very effective means of determining soil drainage. Dig a hole(s) 6 to 8 inches deep and observe the water level following heavy rains. Water should not remain in the hole for more than 24 hrs, otherwise select another site or plant on ridges high enough for the water level to reach 6 to 8 inches deep within 24 hrs.

Irrigation - In most seasons and on most soils, irrigation is absolutely essential the year of planting. Hand watering with a hose is possible for several bushes, however, a soaker hose will usually give more uniform wetting. In larger plantings, systems using micro-sprinklers have been more successful than point-source drippers. Even 2 drippers per plant often do not wet enough of the soil in the root zone. At least 50% of the area under the drip line should be wetted. The irrigation system must be designed for the higher output of micro-sprinklers (about 10 gal per hr) compared with 1 or 2 gal per hr for drippers. Align the micro-sprinklers to avoid saturated soil around the crown of the bushes. The use of automatic timers on drip or microsprinkler irrigation systems can result in shallow root systems and root rotting if systems apply water daily. Apply irrigation no more than once every two days to reduce the chances of root rot infection.

Sun Versus Shade - Full sun is desirable but up to 50% shade is usually acceptable. However, yield is reduced with increasing shade, so plant in a sunny location to achieve maximum yield.

What Species - Both highbush (*Vaccinium corymbosum*) and the rabbiteye (*V. ashei*) types of blueberries can be grown in the Coastal Plain and Piedmont. However, only highbush will consistently survive the minimum winter temperatures below 10°F that regularly occur in the Mountains. The rabbiteye is more drought and heat resistant and will tolerate a wider range of soil types than the highbush. For these reasons, rabbiteye is easier to establish and grow successfully in the Piedmont and on the drier soils of the Coastal Plain than highbush. More recently, a group of varieties referred to as southern highbush have been released. These varieties are intermediate between highbush and rabbiteye in soil and climate adaptation.

Varieties - Highbush varieties begin ripening in mid-May in the southeastern Coastal Plain and in early July in the Mountains. Rabbiteye varieties begin in mid-June in the southeastern Coastal Plain. More than one rabbiteye variety must be planted to provide the cross-pollination required for maximum yields. Following are varieties in order of ripening from early to late that have been grown successfully and are recommended for homeowners:

Coastal Plain - *Highbush*: 'O'Neal' (southern highbush),' 'Morrow', 'Reveille', 'Croatan', 'Murphy', 'Bounty', 'Blue Ridge' (southern highbush), 'Bluechip', 'Jersey'

Coastal Plain and Piedmont - *Rabbiteye*: 'Climax', 'Premier', 'Tifblue', 'Powderblue', 'Centurion'. *Highbush:* 'Blue Ridge' (southern highbush) and 'O'Neal' (southern highbush) have also been grown successfully on Piedmont soils. 'Legacy' (southern highbush) is worthy of trial in these regions as well.

Mountains and Upper Piedmont - *Highbush*: 'Duke', 'Sunrise', 'Blueray', 'Bluecrop', 'Toro', 'Berkeley', 'Jersey'

Planting

a) **Plants** - 2 or 3-year old nursery plants 12-36 inches tall will transplant well. The roots must be kept moist at all times between digging and replanting.

b) **Time** - Late winter (Feb-Mar) as soon as the soil can be worked is best for bare-root plants; Fall (Nov-Dec) planting has been successful on sandy soil in the southeastern Coastal Plain with bare-root plants and in the other areas with potted plants.

c) **Spacing** - Plant highbush varieties every 4-5 ft in the row and 8-10 ft between rows. Plant rabbiteye varieties every 6 ft in the row and 10-12 ft between rows.

d) **Depth** - Plant to the same depth as the plants were growing in the nursery if organic mulch will be applied on the surface. When planting without mulch, plant 1-2 inches deeper to allow for soil settling, firm the soil around the plant with your feet and water thoroughly.

e) **Cut Back** - Prune approximately ⅔ of the top growth on bare-root plants and ½ on potted plants leaving only 1-3 of the most vigorous upright shoots. Remove any remaining flower buds (plump rounded buds), so that the plants will not flower the first year.

Fertilization

a) **Use Caution** - Blueberries are easily damaged by excess fertilizer. Apply the recommended amount from a soil test report and allow 4 inches of rain or an equivalent amount of irrigation between applications.

b) **First Year** - Do not fertilize immediately after planting. Wait until the first leaves have reached full size, then apply 1 Tbs of a special azalea fertilizer, 12-12-12 or 10-10-10 within a circle 1 foot from the plants. Repeat application of fertilizer at 6 week intervals depending upon rainfall or irrigation until mid-August in the Coastal Plain and mid-July in the Mountains. Use ½ Tbs of ammonium nitrate instead of the complete fertilizer for the second and subsequent applications if phosphorus was above 60 on the soil test.

c) **Second Year** - Double the first year's rates, but increase the circle around plants to 1 ½ ft. Apply the first application when new growth begins in spring.

d) **Bearing Plants** - When growth begins in the spring, apply 1 cup of complete fertilizer such as 10-10-10 within a circle 3 ft from the plant. If more vigorous growth is desired, sidedress with ¼ cup of ammonium nitrate at 6 week intervals. On mature bushes 6-12 inches of new growth is adequate for optimal balance of plant size and yield. Additional growth must be pruned away. This may result in a loss in production, but it is necessary to keep the plants from becoming excessively large. Determine sidedressing requirement based on the amount of shoot growth.

e) **Lowering pH** - If the soil pH is slightly high in an established planting based on a soil test; then sidedress with ammonium sulfate rather than ammonium nitrate. If the pH is 0.5 units or more above the acceptable range, apply wettable sulfur in a narrow band under the drip line of the bush at the rate of 0.1 lb per bush to lower pH 1 unit.

Mulching

Organic material such as bark, wood chips, sawdust or pine straw as a 3 to 4 inch mulch on the surface after planting results in more uniform soil moisture, reduces soil temperature and generally promotes better bush growth and survival. Pine bark, chips or sawdust have a pH of 3.5 to 4.5 and are more desirable than the same mulches from hardwood with an associated pH above 5.0. However, hardwood mulches on the surface have been satisfactory. Avoid sticky hardwood sawdust that will "seal" the bed and prevent water infiltration.

Weed Control

a) **Mulched** - Mulching home blueberry plantings is the best form of weed control. If mulch is applied following planting and replaced at the rate of 1 inch per year, few weed problems should develop. Hand pull or hoe the occasional weed growth. If row middles are in sod, mow often to reduce invasion by runnering grasses and weed seeds into the mulched area.

b) **Not Mulched** - Avoid deep cultivation since blueberry roots are very near the surface. Hoe no more than about 1 inch deep. In addition, hoe often (once every 2 weeks) when weeds are germinating to reduce competition with bush growth and to prevent disturbing the roots that will occur when large weeds are removed.

c) **Herbicides** - There are some chemical herbicides that homeowners can use to control weeds. Please contact your local county extension agent for current recommendations.

Pruning

a) **Highbush** - If the plants are cut back severely as recommended following planting, little pruning will be required the second year except removing all flower buds and any weak, damaged or diseased growth. Use a similar pruning strategy the third year with the exception that several flower buds can be left on vigorous shoots. In the fourth year, the bush should be 4-5 ft tall and capable of handling a crop, but carefully thin flower buds to prevent overfruiting and severe permanent bending of young canes under the fruit

weight. When bushes are mature, remove old canes that are weak, diseased or damaged; cut back tall, vigorous shoots to force branching at a lower level and to control bush height; and thin fruiting shoots to reduce the number of flower buds by about 50%. Prune during the dormant season. Late winter is most desirable especially in the Mountains.

b) **Rabbiteye** - During the first 3 years, pruning is very similar to highbush; however, excessively tall and limber shoots will need cutting back to stimulate branching and strengthen the shoot. With mature bushes that are excessively vigorous in spite of low rates of fertilization, cutting back the excessively vigorous shoots in late July will help control bush height and increase yield. Winter pruning of mature bushes is also similar to the recommendation for highbush except detailed thinning of fruiting shoots on each cane is less critical, and more suckers (shoots developing a distance from the crown) will require removal.

Harvest

a) **Yield** - With good care, mature highbush and rabbiteye plants should produce more than 10 lbs each year. Rabbiteye varieties can on occasion produce up to 25 lbs per plant.

b) **Bird Protection** - Birds love to harvest blueberries. They can consume the complete crop from a small planting. Plastic or cloth netting draped over the bushes or supported on a framework, while the fruit is ripening, is the only practical control.

c) **Frequency** - Highbush blueberries will be of best quality when picked every 5-7 days depending upon temperature. Rabbiteye flavor improves if berries are picked less often; about every 10 days allows for maximum flavor with few soft overripe fruit.

Potential for Organic Production - Blueberries can often be grown successfully without insecticides and fungicides outside of the commercial production areas of southeastern North Carolina. Japanese beetles can occasionally cause damage to the fruit during ripening, but the foliage is quite resistant. Susceptible plants such as roses or grapes will usually be defoliated before injury is seen on blueberries. The low rates of fertilizer required make organic sources a viable alternative. Horse manure has proven to be a suitable source of nitrogen and rock phosphate provides adequate phosphate. Weeds can be controlled with shallow cultivation or more desirably with mulch.

Sources of Plants - Blueberries are propagated vegetatively through the use of cuttings. Both hardwood (winter) and softwood (summer) cuttings can be rooted under mist without the use of rooting hormones. While this can be accomplished by the backyard hobbyist or by a local nursery, the best sources of uniform plants for establishing a new planting are nurseries that specialize in blueberry propagation. Some commercial sources will sell single plants, while others require minimum orders of 50 to 100 plants. A partial list of nurseries is included below.

Finch Blueberry Nursery
P. O. Box 669
Bailey, NC 27807
(252) 235-4664
(Rabbiteye, southern highbush, highbush)

Ed Darden
106 Yellow Cut Road
Rose Hill, NC 28458
(910) 289-2849
(Southern highbush, highbush rabbiteye)

Atlantic Blueberry Company
475 S. Chew Road
Hammonton, NJ 08037
(609) 561-8600
(Highbush for mountains)

N.C. Foundation Seed Production
P. O. Box 33245, Method Station
Raleigh, NC 27606
(919) 737-2821
(Recent NC releases)

A.G. Ammon Nursery
P. O. Box 488
Chatsworth, NJ 08019
(609) 726-1370
(Highbush for mountains)

Tower View Nursery
70912 CR 388
South Haven, MI 49090
(616) 637-1279
(Highbush for mountains)

Fall Creek Farm and Nursery, Inc.
39318 Jasper-Lowell Road
Lowell, OR 97452
(541) 937 2973
(Highbush, southern highbush)

For Further Reading

-Blueberry Culture, Rutgers University Press, New Brunswick, NJ
-Blueberry Diseases in Michigan, MSU Ag Facts Extension Bulletin No. E1731
-Blueberry Science, Rutgers University Press, New Brunswick, NJ
-Blueberry Pest Management, NC Cooperative Extension Service AG-492
-Commercial Blueberry Production in Florida, University of Florida Pub. No. SP179
-Compendium of Blueberry and Cranberry Diseases. APS Press, St Paul, MN
-Diseases and Arthropod Pests of Blueberries. N. C. Agricultural Research Service Bulletin 468
-Highbush Blueberry Production Guide, NRAES-55, Ithaca, NY
-Small Fruits in the Home Garden. Gough, R.E. And E.B. Poling (eds). Food Products Press, Binghamton, NY.
-Small Fruit Pest Management and Culture, University of Georgia Cooperative Extension Service Bulletin No. 102

Growing Dill in the Home Garden

Linda Brandon, EMGV

Gardening doesn't get a great deal easier than growing dill (Anethum graveolens). It works well in a large container (large primarily because these rascals can grow *tall*, and they can sort of overwhelm a small container and become top-heavy). Dill grows like a weed in our climate. When you go to the local garden center, pick the seeds that appeal to you; I've never found a huge difference among the varieties, frankly. Three popular strains are called Mammoth, Bouquet, and Fernleaf, and most good garden centers will have at least two of the three.

Dill needs to be planted after the danger of frost has passed . . . . but it doesn't thrive in our intense summer heat. Since it grows quickly, you may be able to harvest some for dill pickles just about the time your cucumbers are ready to preserve. *Don't even look for dill transplants at the garden center, since this is one herb that does not enjoy being transplanted.*

Like most herbs, dill prefers what's called a "lean" soil — specifically, that refers to soil that isn't too rich in nutrients. Rich soil will give you abundant green growth, but at the expense of slightly weaker flavor (if you're harvesting the leaves). It likes to be grown in fairly dry conditions, so mind your watering (another good reason to use a large pot, since it may drain more effectively than a planting in the ground).

When using dill, the immature seeds and fresh leaves provide the signature flavor to dill pickles. The entire flower head and foliage are added to the pickling mixture and slowly infuse the pickles with the dill flavor. To harvest, follow these simple steps:

- Select a flower head that has finished blooming and is setting seeds. Choose one with fresh green seeds instead of dry brown seeds.
- Cut off the entire flower head and place it upside down in the container, so the seeds aren't shaken out and lost.
- Store the seeds and leaves in the refrigerator for up to 24 hours. The leaves will quickly lose their flavor if kept longer than that.

As a bonus for butterfly lovers, dill is a member of the Apiaceae family, which also includes parsley, Queen Anne's Lace, carrot, celery, and fennel. This family is a host plant for the swallowtail butterfly caterpillar.

Please note that this article is from Clemson.
The NCSU article on cabbage was geared toward commercial growers.

CABBAGE & CHINESE CABBAGE

Revised by Barbara H. Smith, HGIC Horticulture Extension Agent, Clemson University, 08/16. Originally prepared by Powell Smith, Lexington County Extension Agent, and Nancy Doubrava, HGIC Horticulture Specialist, Clemson University. New 06/99. Images added 8/16. **HGIC 1303**

Planting

Cabbage (*Brassica oleracea, Capitata* Group) and Chinese cabbage (*Brassica rapa, Pekinensis* Group) are cool-season vegetables that should be grown in early spring or fall. They grow best at temperatures of 60 to 65 °F.

Chinese cabbage forms dense heads that may be very upright and tall (Michihili types) or round and barrel-shaped (Napa types). The leaves are slightly wrinkled and thinner than the leaves of regular cabbage with wide, crisp midribs.

Like many other cool-season crops, they will "bolt" or produce a flower stalk if exposed to a prolonged cold period of 10 or more continuous days of temperatures between 35 and 50 °F following a favorable growing period. When planted in the spring, cabbages must be planted early enough to ensure that they are harvested before temperatures become too hot. Mature cabbages can withstand temperatures as low as 18 to 20 °F.

Cabbage transplants are best for spring plantings, but fall plantings may be directly seeded into the row. Plant spacing affects head size. For 2- to 3-pound heads, transplant plants or space seed 9 to 12 inches apart in rows 36 to 44 inches wide. Varieties for sauerkraut are spaced wider.

Cultivars

Cabbage: Bravo, Market Prize, Rio Verde, Savoy Express, Tropic Giant (hybrid), Green Jewels (hybrid)
Chinese Cabbage: Pak Choi Type - Joi Choi (hybrid)

Soil

Cabbage grows well on a wide variety of soils, but a well-drained sandy loam with high organic matter content is preferred. Soil pH should be 5.8 to 6.5. Have your garden soil tested several months prior to planting and adjust soil pH according to recommendations.

Fertilizing

A soil test is always the best method for determining the fertilization needs of the crop. If a soil test has not been taken, apply 5-10-10 at 3 pounds per 100 square feet before planting. These vegetables should be side-dressed once during the growing season. Side-dress with 34-0-0 at 1 pound per hundred feet of row or 15.5-0-0 (calcium nitrate) at 2 pounds per 100 feet of row. More frequent side-dressing may be required if the garden soil is sandy or leaching rains occur.

Watering

Water the garden to provide a uniform moisture supply to the crop. The garden should be watered in the morning so that the foliage is dry before dark. Water sufficiently to moisten the soil to a depth of at least 6 inches. Light sprinklings will encourage shallow rooting of the plants. The critical periods for moisture are stand establishment and crop maturation. It is important to have a constant uniform moisture supply to produce a high-quality crop and to have the spring crop mature before high summer temperatures. Mulching can help conserve water and reduce weeds.

continued

Harvest & Storage

Cabbage should be ready for harvest 60 to 80 days after planting transplants. Harvest cabbage when the head is firm and has reached adequate size depending on the variety and growing conditions. Once cut, move it out of the sun as soon as possible. Cabbage will "sunblister" and lose weight in direct sun. Store all harvested cabbage in the refrigerator. Cabbage can be stored at 34 °F and 98% humidity for up to five months.

Problems

Head cracking or splitting occurs due to excessive water uptake and growth near maturity. Root-prune with spade or trowel or twist the stalk to break some of the roots and reduce water uptake.
Several worms (imported cabbageworm, cabbage looper, diamondback moth caterpillar), harlequin bugs, cabbage *maggots*, aphids and flea beetles are the major insect problems. For more information, see HGIC 2203, *Cabbage, Broccoli, & Other Cole Crop InsectPests*.

Common disease problems include black rot, wire stem, damping-off, downy mildew, Alternaria leaf spot and watery soft rot. Cabbage is more susceptible to wire stem and downy mildew than Chinese cabbage. Chinese cabbage is more susceptible to Alternaria leaf spot.

Black rot causes the most serious damage and appears as V-shaped lesions down the leaves and spreads into the water conducting system of the plant. Black rot is caused by a bacterium that is seed-borne or that can be transmitted by transplants. Warm, moist weather favors the disease. There is no control for black rot once it is established in a planting. Prevent black rot by purchasing transplants that are marked with a tag indicating that they are certified disease-free or plant western-grown chemically treated seed.

For more information, see HGIC 2202, *Cabbage, Broccoli, & Other Cole Crop Diseases*.
Excerpted from *Home Vegetable Gardening*, EC 570, 2002.

Family Garden Day is Coming!

Guilford County Extension Master Gardener Volunteers are celebrating their Fifth Annual Family Garden Day event, April 18, from 9 a.m. to 1 p.m., and you're all invited!

This year's theme will be **Back Porch Gardening,** with a focus on those who want to grow some of their own food but perhaps lack time, space, or resources. Master Gardeners will demonstrate a variety of quick, easy, and economical ways to use containers to grow food.

Think **FLOWERPOT FOOD!**

Join us in the Legacy Demonstration Garden on the Extension campus at 3309 Burlington Road in Greensboro. We'll have seedlings for sale, kids' hands-on activities, and give-aways!

Carol James and Janet Sommers, EMGV Public Events Co-Chairs

Recipe Corner

Since we talk about cabbage in this issue, here's my very favorite cole slaw recipe, lifted with a couple of notes from the **Better Homes & Gardens Cookbook**. (I know slaw is almost as divisive as barbecue in North Carolina — I like mine creamy, with long pieces of cabbage, so that's the kind I fix. If you have a recipe for a more vinegary version, or one using the tiny chopped pieces of cabbage, feel free to send it on in. We'll be glad to give equal time and share it, too!)

Shred **three cups of cabbage extra fine**. (You can shred it in advance and keep it crisp in ice water in the fridge for an hour or more. Just be sure to drain well before using.)

Combine**:**

- **1/3 cup of mayonnaise or salad dressing**
- **1 tablespoon vinegar**
- **2 teaspoons sugar**
- **1/2 teaspoon salt**
- **1/2 teaspoon celery seed**

Stir until the sugar dissolves completely.

Toss the dressing and the cabbage well, and dig in!

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Master Gardener | Guilford County

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